IMPORTANT:
THESE INSTRUCTIONS ARE TO REMAIN WITH THE HOMEOWNER.
SAVE THESE INSTRUCTIONS

Warmland

SAFETY NOTICE

Please read this entire manual before installation and use of this pellet fuel-burning room heater. Failure to follow these instructions could result in property damage, bodily injury or even death.

INSTALLATION AND OPERATING INSTRUCTIONS



Contact your local building or fire officials regarding permits and any information on installation and inspection requirements in your area.
TESTED and LISTED to ASTM 1509-04, CAN/ULC S627 AND UL 1482

Intertek Intertek

We endorse NATIONAL FIREPLACE INSTITUTE A CERTIFICATION AGENCY

Wood Energy Technical Training www.wettinc.ca

WARMLAND PELLET STOVE

MODEL: PS45 CLASSIC SERIES: A

PLEASE READ THIS ENTIRE OWNER'S MANUAL BEFORE INSTALLING OR OPERATING YOUR WARMLAND PELLET STOVE.

Contents

Introduction

OPERATION: For proper and safe operation, the door and ash drawer must be kept closed to prevent fume spillage when the unit is in operation. The Auger will not operate when they are open. Check all gaskets on the Door, Ash Pan and Hopper lid and replace when necessary.

CAUTION: When operating during extreme weather, if the unit exhibits dramatic changes in combustion stop using the unit immediately.

CLEANING: There will be some build up of fly ash with small amounts of creosote in the exhaust. This will vary due to the ash content of the fuel used and the operation of the stove. Inspect the venting periodically during the heating season to determine if a creosote buildup has occured. If a significant layer of creosote has accumulated,(3mm or more)it should be removed to reduce the risk of a chimney fire. Venting should be cleaned annually or every two tons of pellets used.

CAUTION: The appliance, flue gas connector and the chimney flue require regular cleaning. Check them for blockage prior to re-lighting after a prolonged shut down period.

ASHES: Disposed ashes should be placed in a metal container with a tight fitting lid. The closed container of ashes should be on a non-combustible surface, well away from all combustible materials pending final disposal. If the ashes are disposed of by burial in soil or otherwise locally dispensed, they should be retained in the closed container until all cinders have thoroughly cooled.

SOOT: Operation of the stove with insufficient combustion air will result in the formation of soot and/or creosote which will collect on the glass, the heat exchanger, the exhaust vent system, and may stain the outside of the house. Frequently check your stove and adjust as needed to ensure proper combustion. See: "VENT/DAMPER SETTING".

SMOKE DETECTORS - Since there are always several potential sources of fire in any home, we recommend installing smoke detectors. If your local code requires a smoke detector be installed within the same room, you must follow the requirements of your local code. Check with your local building/fire department for requirements in your area.

THERMOSTAT: This stove can be operated manually or with a low voltage wall thermostat. (see page 12)

IGNITION: This stove is equipped with an electric self igniter system.

If you have any questions with regards to your stove or the above-mentioned information, please contact your local dealer for further clarification and comments.

SAVE THIS INSTRUCTION MANUAL FOR FUTURE REFERENCE

Specifications

Rating Label Location::

The rating label is located on the inside of the Hopper Lid

Listing information

The Warmland PS45 Classic stove was safety tested by Intertek Testing Services NA Ltd. and is listed to the following standards: ASTM 1509-04, ULC 627S, UL 1482

Heating Specifications:

- Max. feed rate is up to 5.2 pounds/hour or 45,000 BTU/hour
- Min. feed rate is 1.3 pounds/hour or 12,000 BTU/hour

*** Depending on fuel type and quality ***

Electrical:

- 120 volts, 60 Hz
- 700 Watts - Maximum.
- 300 Watts - Normal operating.

WARNING

This appliance is equipped with a three-prong (grounding) plug for your protection against shock hazard and should be plugged directly into a properly grounded three-prong, 120 volt, 60 Hz receptacle. Do not cut or remove the grounding prong from this plug. Do not route power cord under or in front of appliance. The power supply cord must be routed to avoid contact with any of the hot or sharp exterior surface areas of the stove.

The use of a surge protected power bar is recommended to ensure the stove's electrical components are not damaged due to a surge in the electrical supply.

When installed in a manufactured home, the appliance must be electrically grounded to the steel chassis.

Electrical Generator Operation

Your Warmland PS45 Classic stove may be able to operate with power from a portable generator. However, the generator's electrical regulator may not be compatible with the stove's electronics. The higher the quality of the generator, (smoother the output sine wave) the greater the chance that it is compatible with the stove.

CAUTION: Unit is hot while in operation. Parts of the appliance, especially the external surfaces, will be hot to touch when in operation. Keep children, clothing and furniture away. Contact may cause skin burns.

FLAMMABLE LIQUIDS: Never use gasoline, gasoline-type lantern fuel, kerosene, charcoal lighter fluid, or similar liquids to start or "freshen up" a fire in the heater. Keep all such liquids well away from the heater while it is in use.

CAUTION: Do not connect to any air distribution duct or system. Do not install a flue damper in the exhaust venting system of this unit. Do not connect this unit to a chimney flue serving another appliance.

WARNING: Never place furniture, wood, paper, drapes or other combustible materials within 48" (122cm) of the front of the unit, 6" (15cm) from each side, and 3" (8cm) from the back of the unit. Do not let children or pets touch it when it is hot.

To prevent the possibility of a fire, have the appliance installed by a professional. Ensure that the appliance is properly installed by adhering to the installation instructions. Your dealer will be happy to assist you in obtaining information with regards to your local building codes and installation restrictions.

CHIMNEY OR RUN AWAY VENT FIRE: Call local fire department. Extinguish the fire in the burn pot liner with a cup of water and close the door. Examine the flue pipes, chimney, attic, and roof of the house, to see if any part has become hot enough to catch fire. If necessary, spray with fire extinguisher or water from the garden hose. IMPORTANT: Do not operate the stove again until you are certain the chimney and its lining have not been damaged.

GLASS: Do not abuse the glass by striking or slamming the door. Do not operate appliance with the glass front removed, cracked, or broken. The stove uses ceramic glass. Replacement of the glass should be done by a qualified service technician. Replacement glass must be purchased through a Pacific Energy Fireplace Products dealer. Do not attempt to open the door and clean the glass while the unit is in operation or if glass is hot.

KEEP ASH PAN FREE OF RAW FUEL. DO NOT PLACE UNBURNED OR NEW PELLET FUEL IN ASH PAN. A FIRE IN THE ASH PAN MAY OCCUR.

Children and adults should be alerted to the hazards of high surface temperature and should stay away to avoid burns or clothing ignition. Young children should be carefully supervised when they are in the same room as the Warmland PS45 Pellet stove.

Any grill, panel, or glass removed for service MUST be replaced prior to operating the stove.

Negative Pressure Warning

This appliance has not been designed to be operated in a negatively pressurized room. - Provide adequate air for combustion.

The stove's exhaust system works with negative combustion chamber pressure and a slightly positive chimney pressure. It is very important to ensure that the exhaust system be sealed and airtight. The ash pan and viewing door must be locked securely for proper and safe operation of the pellet stove.
(See Page 15)

Do not burn with insufficient combustion air. A periodic check is recommended to ensure proper combustion air is admitted to the combustion chamber. Setting the proper combustion air is required after installation. Minor adjustments can be made on the controls.

The fresh air requirements of this appliance must be met within the space where it will be installed. In well insulated and air tight homes, a lack of air for combustion can be caused by many common household appliances which exhaust air from the home (such as a furnace, heat pump, air conditioner, clothes dryer, exhaust fans, fireplaces, and other fuel burning appliances). Also, the combustion process of this heater uses oxygen from inside the dwelling. If the available fresh air delivery in the home is insufficient to support the pellet stove, problems can result (i.e. excessive negative pressure will result in performance problems). To correct this problem it may help to open a window (preferably on the windward side of the house) or install an outside combustion air duct to the appliance. Outside Fresh Air is required for mobile home installations

The combustion air inlet for this stove is drawn through a pipe at the lower rear of the stove. A 2" id. flex line or pipe can be attached to the stove's air intake to draw air from outside the house.

Outside air connected to the appliance will greatly reduce the risk, but may not eliminate the problem. Pacific Energy Fireplace Products Ltd. accepts no liability for damages resulting from negative pressures described here.

Pellet Fuel Specifications

This stove is designed and approved to burn wood pellet fuel only. Burning any other fuel that is not approved for use with this appliance will void the appliance warranty.

The performance of your pellet stove is greatly affected by different fuel densities and sizes, wood type and quality of fuel being burned. These differences will affect the feed rate, performance and heat output of the pellet stove. Try burning various brands of pellets until you find one that burns with minimum ash. Once you find a pellet brand that burns well, continue using this brand. High ash fuel increases the frequency of stove cleaning. Fuel with an excessive moisture content may jam the auger assembly.

Store fuels at least 36" (1 m) away from the pellet stove.

CAUTION: It is important to select and use only fuel that is dry and free of dirt or other impurities such as high salt content. "Dirty" fuel will adversely affect the operation and performance of the unit and will void the warranty. We recommend the use of pellets that meet or exceed the PFI standards. Ask your dealer for a recommended pellet type.

Pellet fuel is made from sawdust and scrap wood from many different species of wood. Pellets are either 1/4" or 5/16" in diameter and vary in length. The Warmland PS45 Classic stove will burn either diameter pellets.

ASH: The ash content of the fuel and operation of your stove will directly determine the frequency of cleaning. The use of high ash fuels may result in the stove needing to be cleaned daily. Pellets made from hardwoods contain more ash than those made from softwoods

CLINKERING: Clinkers are minerals, silica (sand) or other impurities in the fuel that will form a hard mass during the burning process. This heater has a burn pot cleaning system designed to prevent clinkers from blocking the holes in the liner. If they do become blocked, remove the liner (when the unit is cold) and clean/scrape the clinkers out. Clean the holes with a small pointed object if required. Refer to the section "Routine Cleaning and Maintenance".

Wood Pellet Specifications: This appliance has been designed to burn wood pellets with up to 3% ash content. Dirty fuel will adversely affect the performance of the stove.
Wood pellets manufactured to the pellet fuels institute (P.F.I.) certification standard are available in two grades, Standard and Premium. The primary difference between the two is the ash content of the pellets.

The P.F.I. specification for standard grade and premium grade residential pellet fuel is as follows:

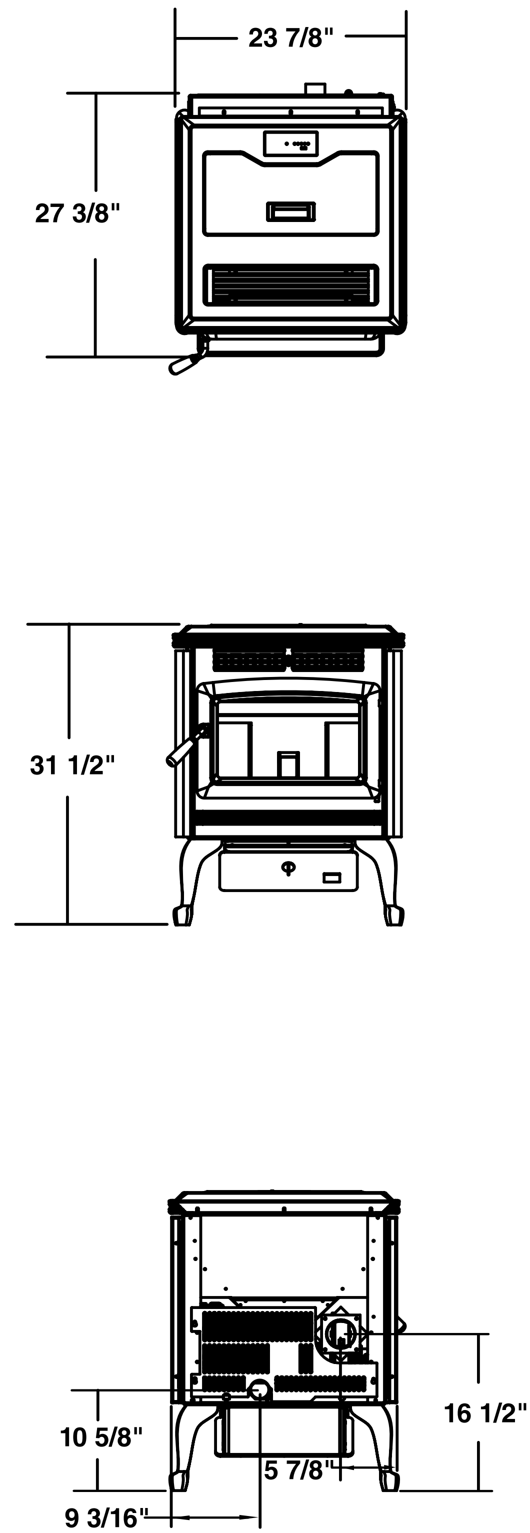
- CHLORIDES (Salt): Less than 300 p.p.m. to avoid stove and vent rusting.
- BULK DENSITY: 40 lb. / Cu. Ft. minimum
- MOISTURE CONTENT: 8% maximum
- ASH CONTENT: < 3% (standard grade)
  < 1% maximum (premium grade)
- FINES: 0.5% maximum through a 1/8" screen
- BTU CONTENT: There are a number of variations in pellet fuels that are not included in PFI standards. For example, BTU (heat value) content may range from just under 7,000 to almost 9,000 Btu, depending upon species and region of the country and other variables.

THE USE OF CORDWOOD IS PROHIBITED. Do not burn garbage or flammable fluids such as gasoline, naptha or engine oil.

Stove Dimensions

Weight - 325 pounds (147 Kg.)
Hopper Capacity - up to 52 pounds (23.5 Kg.) Results will vary based on fuel density.

FIG. #1



Installation

Before You Begin

Please read and carefully follow all of the installation and operating instructions found in this manual. Please pay special attention to the safety instructions provided in this manual.

It is recommended that you have this appliance installed by a W.E.T.T or N.F.I. qualified installer.

Contact your local building or fire official to obtain a permit and any information on installation restrictions and inspection requirements for your area. Check all local building and safety codes before installation. The installation instructions and appropriate code requirements must be followed exactly and without compromise. Familiarity with these requirements before installation is essential.

Failure to follow these instructions will void the manufacturers warranty. Alterations to the stove are not allowed.

Product is subject to change without notice

Installation Options

- Residential or Manufactured/Mobile Home
- Alcove Compatible
- Vertical and Horizontal Vent (see venting instructions)
- Thermostat or manual operation
- Outside Air Compatible

Selecting A Location

Be sure to maintain the structural integrity of your home when passing a vent through walls, ceilings, or roofs, and all construction meets local building codes. It is recommended that the unit be secured into its position in order to avoid any displacement. This appliance must be installed on a floor with an adequate load bearing capacity, if existing construction doesn't meet load capacity, suitable measures (e.g. load distributing plate) must be taken to achieve it.

Due to high temperatures, the stove should be located out of traffic areas and away from furniture and draperies.

The layout of your house and the location of the Pellet Stove will determine how effective it is at heating the intended area. Pellet Stoves use mainly air circulation to disperse their heat, therefore a central location works best.

Consider the following things when selecting a location:

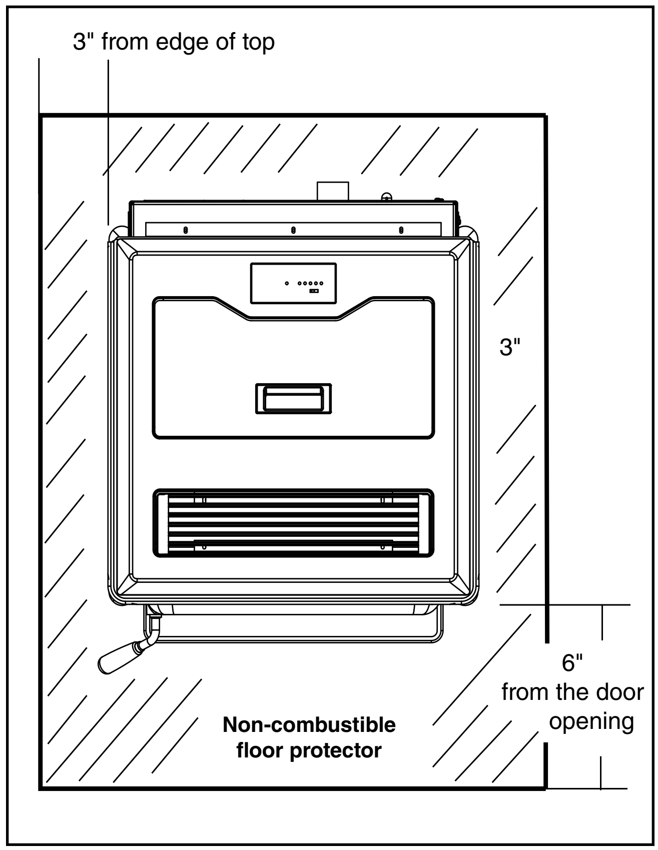
- Use of an Existing Chimney
- Location of Vent Termination
- Aesthetic Considerations
- Interference with House Framing, Plumbing and Wiring
- Floor Protection
- Room Traffic Patterns
- Proximity to Combustibles
- Location of Air for Combustion
- Electrical Outlet
- Pellet Fuel Storage

CAUTION: DO NOT CONNECT TO OR USE IN CONJUNCTION WITH ANY AIR DISTRIBUTION DUCT WORK UNLESS SPECIFICALLY APPROVED FOR SUCH INSTALLATIONS.

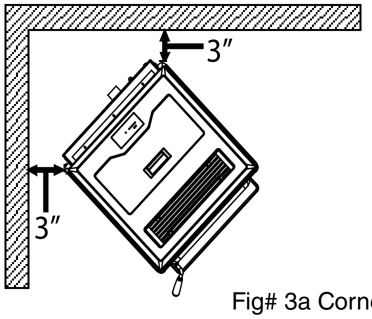
Hearth Protection

The appliance must be installed on a non-combustible floor protector extending the full width and depth under the heater and 6" (152mm) beyond the front and beyond each side of the Firebox Viewing Door and Ash Pan openings.

FIG. #2



Clearances to Combustibles



Fig# 3a Corner Install

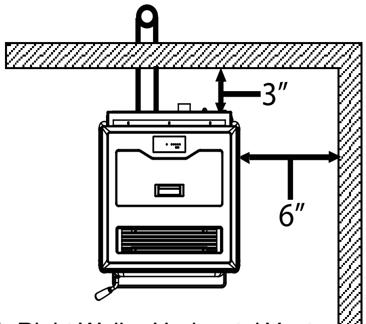


Fig #3b Right Wall - Horizontal Vent

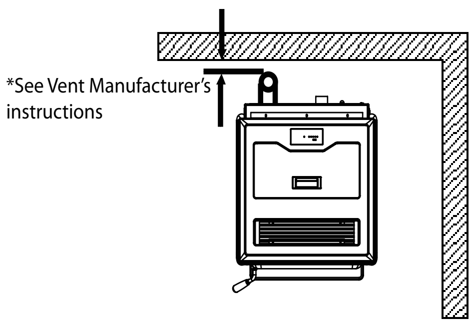


Fig #3c Right Wall - vertical vent

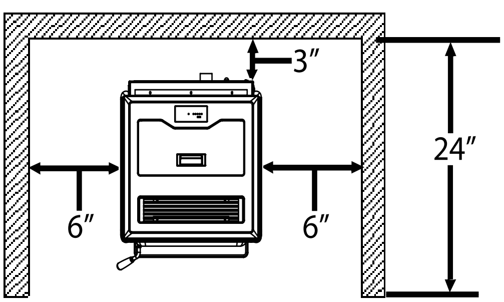


Fig #3d Alcove Installation

NOTE: INSTALL VENT AT CLEARANCES SPECIFIED BY THE VENT MANUFACTURER

Clearances:

Front 48" (1.2m)
Side 6" (155mm)
Back 3" (76mm)

The center of the flue is 16-1/2" above the surface upon which the stove rests.

IMPORTANT
INSTALL VENT AT CLEARANCES SPECIFIED BY THE VENT MANUFACTURER.

- Minimum clearances specified may not allow for ease of operation and maintenance (please take this in to account when planning the installation). If installed to the minimum clearances, removal of the appliance may be necessary for servicing.
- Recommended clearance zone from the front of the appliance to combustibles is 4 feet minimum.

NOTE: DIAGRAMS & ILLUSTRATIONS ARE NOT TO SCALE.

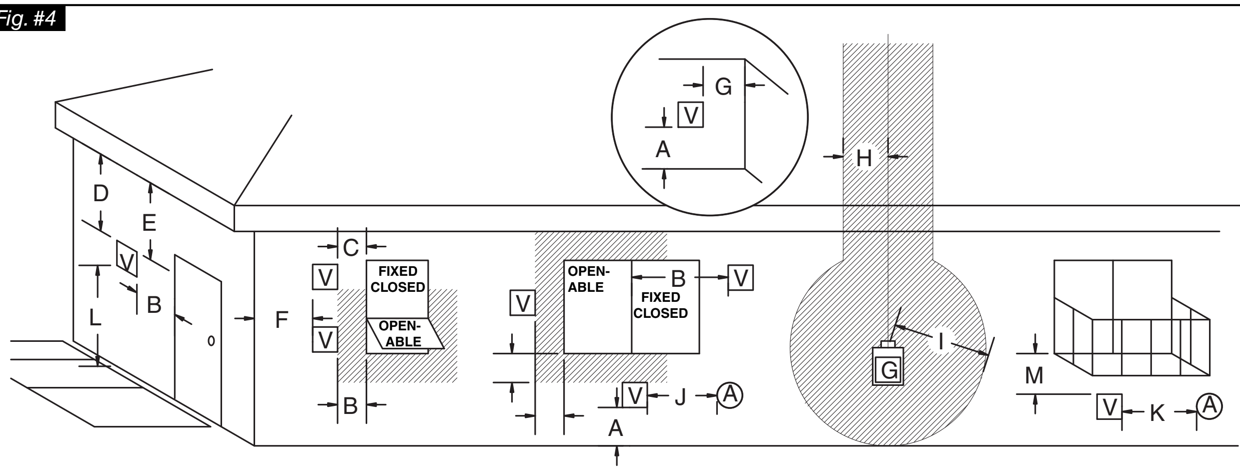
Alcove Installations

Minimum alcove height is 5 ft. (1.54 m), minimum width is 36 in. (92 cm) and maximum depth is 24 in. (61 cm).

Note, it is difficult to service the unit when installed in a 36 in. alcove and may require the unit to be removed for servicing. Please allow as much area on either side of the unit as possible for ease of service.

Vent Terminal Minimum Clearances

Fig. #4



V VENT TERMINAL   A AIR SUPPLY INLET   AREA WHERE TERMINAL IS NOT PERMITTED   G GAS METER

ALL CLEARANCES ARE MINIMUMS

A=	*12 inches (30 cm)	Clearances above non combustible grade
	*24 inches (60 cm)	Clearances above grass, top of plants, wood, combustible veranda, porch, deck, or balcony
B=	*48 inches (120 cm)	Clearance beside or below a window or door that may be opened
	*18 inches (45 cm)	If Fresh Air is Installed to the Unit - Clearance beside or below a window or door that may be opened
	*12 inches (30 cm)	Above a window or door that opens
C=	12 inches (30 cm)	Clearance to permanently closed window recommended to prevent condensation on window
D=	36 inches (76 cm)	Vertical clearance to ventilated soffit located above the terminal within a horizontal distance of 2 feet (60 cm) from the edge of the terminal
	18 inches (45 cm)	If Fresh Air Installed to Unit - Vertical clearance to ventilated soffit located above the terminal within a horizontal distance of 2 feet (60 cm) from the edge of the terminal
E=	12 inches (30 cm)	Clearance to unventilated soffit
F=	12 inches (30 cm)	Clearance to outside corner
G=	12 inches (30 cm)	Clearance to inside corner
H=	3 feet (90 cm)	*Not to be installed above a meter/regulator assembly within 3 feet (90 cm) horizontally from the center-line of the regulator
I=	*6 feet (1.8 m)	Clearance to service regulator vent outlet
J=	*4 feet(1.2 m)	Clearance to non mechanical air supply inlet to building or the combustion air inlet to any other appliance
	12 inches (30 cm)	If Fresh Air installed to Unit - Clearance to non mechanical air supply inlet to building or the combustion air inlet to any other appliance
K=	*10 feet (3.1 m)	Clearance to a mechanical air supply inlet
L=	7 feet (2.1 m)	^ Clearance above paved side-walk or a paved driveway located on public property
M=	**12 inches (30 cm)	Clearance under veranda, porch, deck, or balcony

^ a vent shall not terminate directly above a side-walk or paved driveway which is located between two single family dwellings and serves both dwellings*

** only permitted if veranda, porch, deck, or balcony is fully open on a minimum of 2 sides beneath the floor*

* as specified in CGA B149 Installation Codes, Note: local Codes or Regulation may require different clearances

* for U.S.A. Installations follow the current National Fuel Gas Code, ANSI Z223.1

Vent Termination Requirement

1. Do not terminate the vent in any enclosed or semi-enclosed areas such as a carport, garage, attic, crawlspace, narrow walkway, closely fenced area, under an enclosed sundeck or porch, or any location that can build up a concentration of fumes such as stairwells, covered breezeway, etc.

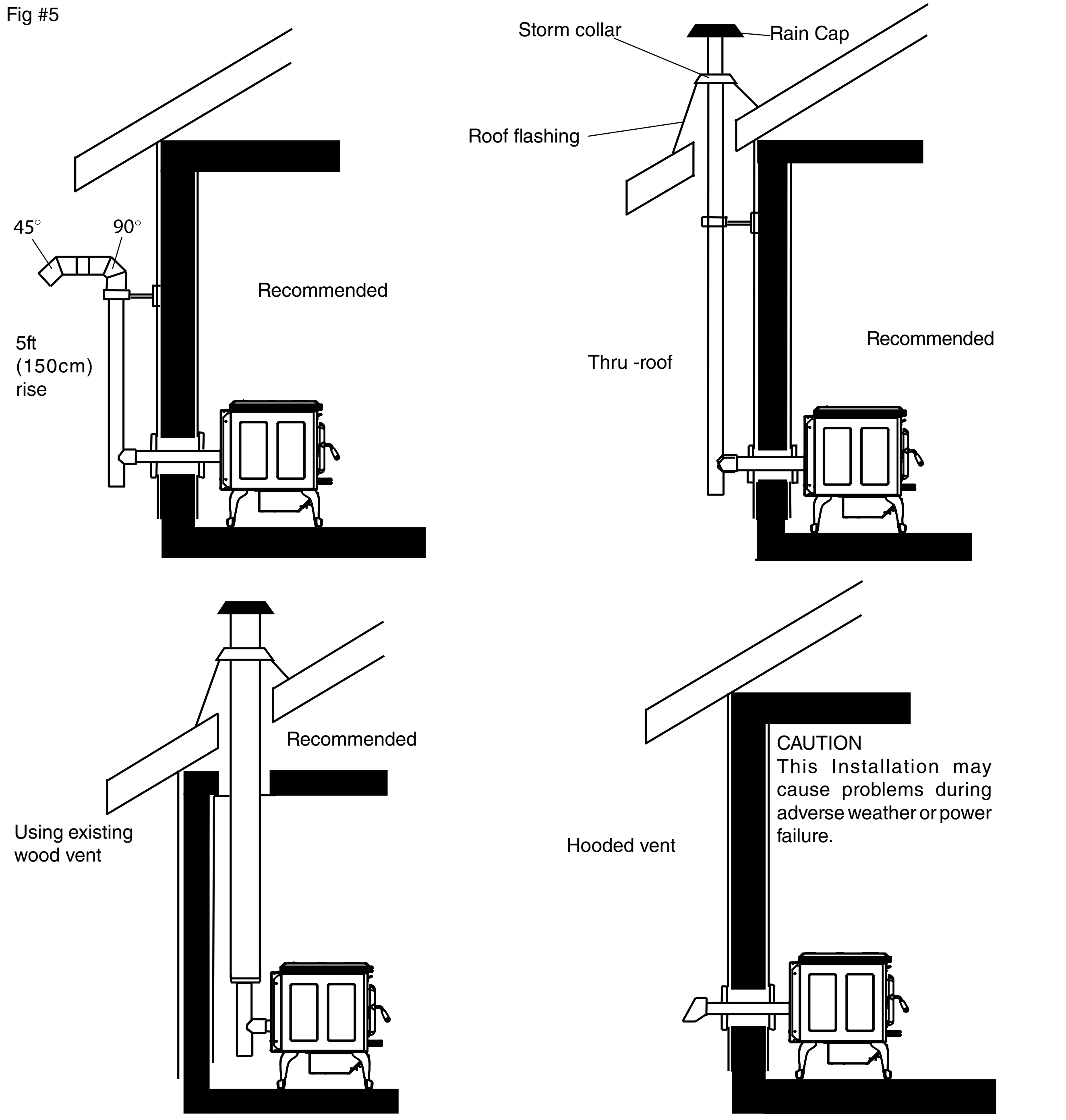
2. Termination must exhaust above the inlet elevation. It is recommended that at least five feet of vertical pipe be installed in the vent system. This will create a natural draft to prevent the possibility of smoke or odor during appliance shut down or power failure and avoid exposing people or landscaping shrubs to high temperatures.

3 .Vent surfaces can become hot enough to cause burns if touched. Non-combustible shielding or guards may be required.

4. The Vent must terminate a minimum of 12 inches (30 cm) from the wall. Vertical termination must protrude a minimum of 24" (60 cm) from the roof surface.

5. Locate the vent termination at least two feet away from combustible materials such as shrubs, plants, grass, fences, roof overhangs and adjacent buildings.

Fig #5



Venting

This heater is approved for venting with any 3" or 4" Type PL and Type L pellet vent pipe listed to UL 641 and ULC S609. Stainless Steel Single wall pipe can ONLY be used as a liner inside a masonry or approved wood burning chimney system on this pellet stove. The stove's flue collar is 3" in diameter.

The vent pipe can be installed vertically or horizontally (see Venting section for recommended installations).
Note: When installing this stove at altitudes over 4000 feet, we suggest the use of 4" pellet vent.

The stove's combustion blower pressurizes and pushes flue gases out the vent pipe. The vent pipe should be siliconed and fastened with three screws to the stove's starter pipe. If the pipe does not have a locking system then all pipe joints should be screwed together with three screws. If required, seal all joints with high temperature silicone or aluminium tape.

An approved wall thimble or approved ceiling, firestop must be used when the pellet pipe passes through a combustible wall or ceiling. Where the vent pipe may pass through a wall, or partition of combustible materials, the installation shall conform to CAN/CSA-B365, as well as any local/regional codes. When installing the wall thimble and other venting components, follow the vent manufacturers instructions. Maintain an effective vapor barrier at the location where the chimney or other component penetrates to the exterior of the structure.

The longer the run of pipe and the more elbows used, the greater the resistance to the flow of flue gases. 4 inch diameter pellet pipe is recommended for horizontal runs greater than 10 feet (3 m) or when more than 3 elbows are used.

INSTALL VENT AT CLEARANCES SPECIFIED BY THE VENT MANUFACTURER.

To aid in cleaning, whenever possible, the venting system should include a tee with clean out at the transition from horizontal to vertical.

DO NOT INSTALL A FLUE DAMPER IN THE EXHAUST VENTING SYSTEM OF THIS UNIT. DO NOT CONNECT THIS UNIT TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE.

Horizontal installations that terminate without any vertical sections of pipe are approved; however, it is recommended that a minimum of 5 ft. of vertical be included in the vent system. Having a vertical section in the venting will help prevent smoke from exiting the appliance during power failures.

Wind may direct flue gases back towards the vent and the house, causing operation and/or discoloring problems. For this reason, vertical through the eave installations are ideal .

Installing into a Wood Stove Pipe

The Warmland PS45 Classic stove can be vented into existing 6" inside diameter approved wood stove pipe using approved adapter.

Installing into a Masonry Chimney

When venting into a masonry chimney, use an approved 3" or 4" Stainless Steel Liner Kit all the way up the chimney. Use a sealing plate at the top of the chimney and a rain cap on the flue pipe.

A "Chimney connector" shall not pass through an attic or roof space, closet or similar concealed space, or a floor, or ceiling. Where passage through a wall or partion of combustible construction is desired, the installation shall conform to CAN/CSA-B365, Installation code for Solid-Fuel Burning Appliances and Equipment

Mobile Home Installations

The following are required for installation of the Warmland PS45 stove in mobile homes:

1. Connecting the Warmland PS45 Classic stove to outside combustion air is required. See section "Oustside Air" below

2. The stove must be fastened to the floor using lag screws. The screws can be inserted through the holes in the legs.

3. The stove chassis must be grounded with a #8 or larger copper wire.

It is important that you use all specified components. Do not use anything other than specified components.

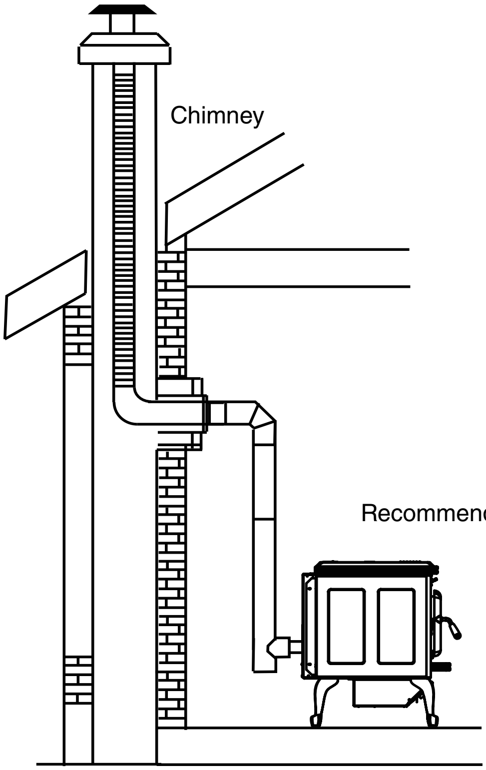
WARNING:
DO NOT INSTALL THIS STOVE IN A SLEEPING ROOM IN A MANUFACTURED HOME.

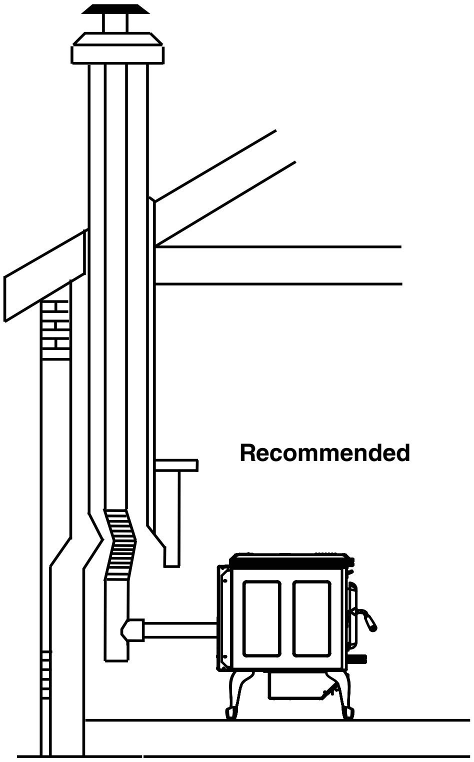
CAUTION:
THE STRUCTURAL INTEGRITY OF THE MANUFACTURED HOME FLOOR, WALL AND CEILING/ROOF MUST BE MAINTAINED.

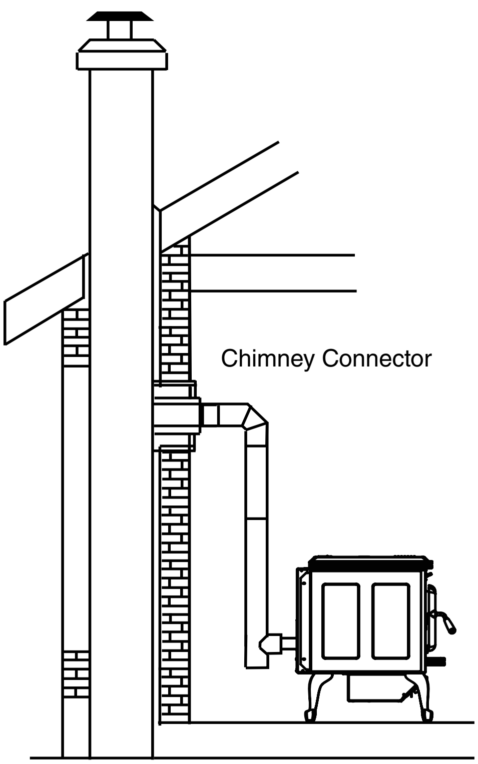
Outside Air

Connecting the Warmland PS45 Classic stove to outside combustion air is optional, except in mobile home installations and when required by local building codes. The stove's air intake will accept 2" ID non combustible pipe to accommodate outside air installations. The air intake on the exterior of the home should always be located substantially below the flue termination and terminate with a screen cover to keep out weather and pests. Outside air can be taken from a well ventilated crawl space.

Fig #6







Caution:
This configuration May Not be allowed in some areas. Check with local authorities

The chimney may incorporate an offset. To do this safely, all sections of listed connector, offset elbows and chimney section must be screwed together by at least three sheet metal screws per joint. The chimney must be suitably supported by the chimney manufacturer's listed offset support.

Thermostat installation

The Warmland PS45 Classic stove can be operated manually or by a thermostat. The stove comes from the factory in the manual mode. To operate in the two "Thermostat" modes a low voltage thermostat must be installed. Consult dealer for appropriate thermostat.

To install the thermostat:

1) Unplug the stove from the electrical outlet. Open the right cabinet side (page 16, Fig #14) and remove the 2 screws holding the main board to the side of the hopper. (see Fig. #7)

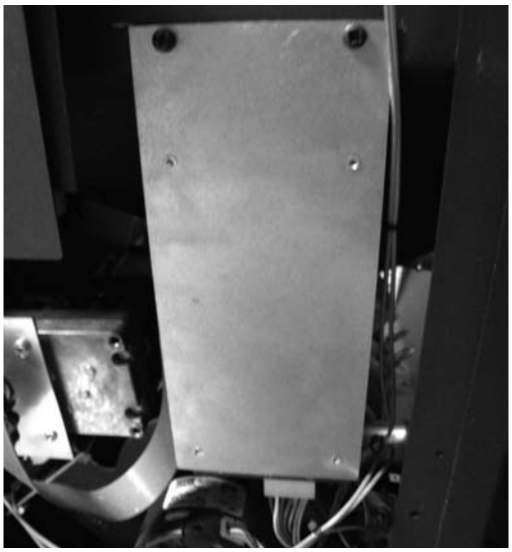
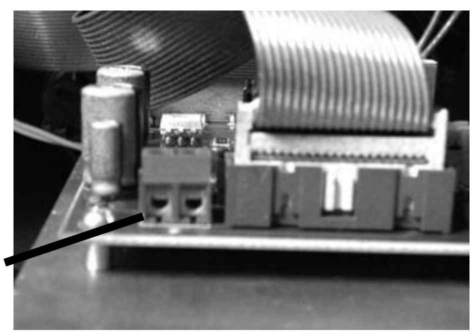


Fig. #7

2) Locate the double screw terminal wiring block at the top of the board, (Fig. #8) loosen the two screws on the block. Insert one of the wires from the thermostat into one of the slots and tighten the screw. Repeat this process for the other thermostat wire.

Fig. #8



Thermostat Screw Terminal

See Page 13 for thermostat operation modes.

IMPORTANT NOTE: Follow the Thermostat manufacturers installation and set-up instructions. Failure to follow manufacturers instructions could result in a malfunction. Pay special attention to the thermostat location requirements. If the location requirements are not followed, the appliance may operate erratically or failure may occur.

Do not mount the thermostat where it may be affected by:

- Radiant heat from the stove, sun or other heat sources.
- Drafts or dead spots behind doors or in corners.
- Hot or cold air from ducts.

Operation

Filling the Hopper

The hopper can be accessed by lifting the hopper lid in the top. Check for any foreign objects in the hopper before filling with pellets.

Control Board

The control board regulates all functions of the stove. The controls are located on the top near the back of the unit.

The following is a list of the board's controls:

• POWER light - Is red during start-up, switching to green when the stove is finished the start-up sequence. Flashes when the auger is feeding pellets into the Burn-Pot.

• ON/OFF Button - Is pushed to start the stove, and to turn the auger off and start the shut down sequence.

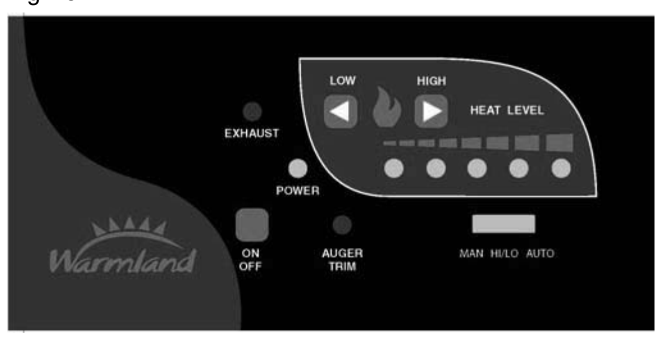
• HEAT LEVEL Buttons - LOW is pushed to reduce the heat output. It is also used to reduce the values of the "trim" settings. HIGH is pushed to increase the heat output setting. It is also used to increase the values of the "trim" settings.

• AUGER TRIM - Used with the high/low buttons to trim the auger timing pulses when the pellet quality/size requires more or less fuel to burn properly.

• EXHAUST TRIM - Can be used with the high/low buttons to adjust the combustion blower speed to compensate for changes to air/fuel ratio.

• MAN-HI/LO-AUTO - Thermostat mode selector switch. The slide switch is used to select the desired thermostat mode. (See "Thermostat Operation" on page 13)

Fig. #9



Lighting your Stove

Note: If this is the first time the stove has been started or the stove has run out of pellets, the auger will be empty and the Burn-Pot liner will need to be primed. To prime, place a handful of pellets into the middle of the liner.

On the control board, push the ON/OFF button. This will turn the POWER indicator light red and will begin a 15 minute lighting sequence. During the lighting sequence, the auger will pre-load the Burn-Pot liner with pellets, the igniter will light the pellets and once lit, the auger will resume feeding pellets. Some smoke inside the firebox can be expected during light up. Once the ignition cycle is finished and the stove is at operating temperature, the POWER light will turn green. The stove will continue to burn at the desired level indicated by the HEAT LEVEL display.

Caution: Do not attempt to re-start the lighting sequence before it has run its course as the Burn-Pot will overload with pellets. If after 15 minutes the stove is not lit, the middle light of the HEAT LEVEL display will flash red. When cooled, empty the burn pot liner of any unburned pellets and re-start the stove.

WARNING: Never empty unburned pellets from the Burn-Pot into the pellet hopper. Pellets that appear to be cool may retain enough heat to ignite other pellets resulting in smoke or fire damage.

General Operation

Use the HEAT LEVEL LOW and HIGH buttons to adjust the heat level to the desired setting.

Avoid over firing the stove - do not hand feed pellets to the appliance.

Turning the Unit OFF

• Normal - To turn the stove off, press the ON/OFF button. Lights will go out. The Auger will stop but the fans and Burn-Pot Cleaner will continue to operate until the temperature drops and the control board completes the shut down cycle.

• Power Outage - If the stove loses electrical power and it is hot when power returns, the stove will go into a start-up sequence and will continue to operate. If the power loss is long enough for the stove to cool, the stove will not start until the ON/OFF switch is pressed. If the stove is connected to a thermostat in the Auto mode", the stove will not start the ignition sequence until the thermostat calls for heat again.

Convection Blower Operation

Your Warmland PS45 Classic stove comes equipped with a convection blower that extracts heat from the stove. After the stove warms up, the fan will turn on. The speed of the fan varies with the burn rate of the stove. The fan will continue to extract heat after the stove shuts off and until it has cooled down.

Operating Sounds

As the Warmland PS45 Classic stove is burning, a number of normal operational sounds may be heard. When the blowers come on, the sound of rushing air can be heard. The lower the burn rate the slower the fan operates. Pellets can be heard dropping into the Burn-Pot. Also, the motors turning the auger and the Burn Pot Mixer may be heard as they pulse on and off. Occasionally a noise might be heard as the auger cuts a pellet in half.

Thermostat Operation

Once installed, the thermostat can control the operation of the stove. Use a low voltage/millivolt thermostat. See Page 12 for installation instructions.

Important: When connected to a thermostat, it is necessary to push the ignite button for the initial burn, when the electrical flow to the stove is interrupted, or if the stove runs out of pellets and therefore shuts off.

MANUAL Mode

After the stove is burning (see "Starting the Stove"), the heat level setting controls the pellet feed rate and the stove's heat output. Once set, the stove will continue to burn at this rate until the heat level is changed or the stove is shut off.

HI/LO Mode:

After the initial ignition sequence, when the thermostat calls for heat (the room temperature is less than the temperature set on the thermostat), the stove will burn at the heat level setting. The higher the setting, the quicker the room will heat up. Once the thermostat no longer calls for heat (the room is up to the desired temperature), the stove will drop down to burn at the lowest HEAT LEVEL setting. This cycle will continue until the stove is turned off or runs out of fuel.

AUTO Mode:

When the thermostat calls for heat (the room temperature is less than the temperature set on the thermostat), the stove will burn at the heat level setting. The higher the setting, the quicker the room will heat up. Once the thermostat no longer calls for heat (the room is up to the desired temperature), the stove will drop down to burn at the lowest HEAT LEVEL setting. The stove will continue to burn for 45 minutes at the lowest setting. If the thermostat does not call for heat again during that time, the stove will shut off. It will relight when the thermostat calls for heat. If, during that 45 min., the thermostat calls for heat again, the stove will again burn at the HEAT LEVEL setting until the thermostat no longer calls for heat.

Paint Curing

This stove has been painted with a high temperature metallic paint. It is dry to the touch, but completes the curing process during the first few times the stove is burned. Also, some parts of the appliance may be lightly coated with machining oil. During the first firings, the paint and oil may give off unpleasant odors. Open the windows to ventilate the room.

Plated Surfaces

CAUTION: Always ensure that plated surfaces are clean and free of fingerprints before lighting stove. Fingerprints will leave permanent blemishes if left on plated surface when hot. The door should be gently cleaned with a soft cloth and glass cleaner.

Routine Checks and Maintenance

Inspection /cleaning	weekly	monthly	yearly	
Ash Pan - Leg Model	X			or Every 15 bags of fuel burned
Burn-Pot	X			or Every 5 bags of fuel burned
Burn-Pot Liner	X			or more frequently depending on fuel quality
Blower - Convection			X	or more frequently if pets present
Blower - Exhaust			X	or more frequently depending on fuel quality
Firebox			X	or more frequently depending on fuel quality
Heat Exchanger	X			or more frequently depending on fuel quality
Venting system			X	more frequently depending on fuel quality
Glass	X			or if viewing area becomes completely obstructed
Door Seals/Gaskets		X		Replace if damaged

CAUTION: INSTALLATION AND REPAIR SHOULD ONLY BE PERFORMED BY A QUALIFIED SERVICE TECHNICIAN. DO NOT ATTEMPT TO SERVICE THE APPLIANCE YOURSELF.

IMPORTANT CAUTIONS:

• SHUT DOWN THE STOVE AND UNPLUG POWER CORD TO ENSURE APPLIANCE IS COLD BEFORE PERFORMING ANY MAINTENANCE WORK.

• Some brands of pellets produce more ash and clinkers than others. Therefore the frequency of performing the following cleaning procedures depends to a great degree on the type of pellets burned.

• Not cleaning this unit will cause it to burn poorly and will void your warranty for this appliance.

• A cleaning brush can be used to loosen any ash build-up before vacuuming.

DO NOT USE A STANDARD HOUSEHOLD VACUUM. WHEN USING A SHOP VACUUM, A FINE DUST FILTER MUST BE INSTALLED. AS THE STANDARD FILTERS WILL LEAK THE FINE PARTICLES OF ASH INTO THE HOME. DEPENDING ON THE SYSTEM, USE CAUTION AS SOME DUST MAY STILL PASS THROUGH THE VACUUM.

DO NOT VACUUM HOT ASH!

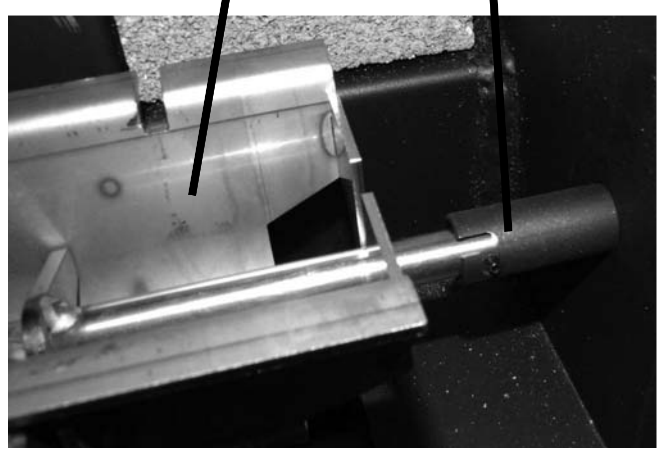
• Using a drop cloth is recommended as some ash may spill onto the floor during the cleaning process

Burn-Pot and Liner Cleaning

The Burn-Pot Liner has a number of holes in the bottom and sides that provide combustion air to the pellets. The extreme temperatures in the Burn-Pot can cause the impurities in the pellets to form ash and clinkers.

The rotating Burn-Pot mixer is designed to clean and move spent ash out of the Burn-Pot Liner. However, some grades of pellets may slowly restrict the holes in the Liner. The liner should be inspected periodically to ensure the holes are clear.

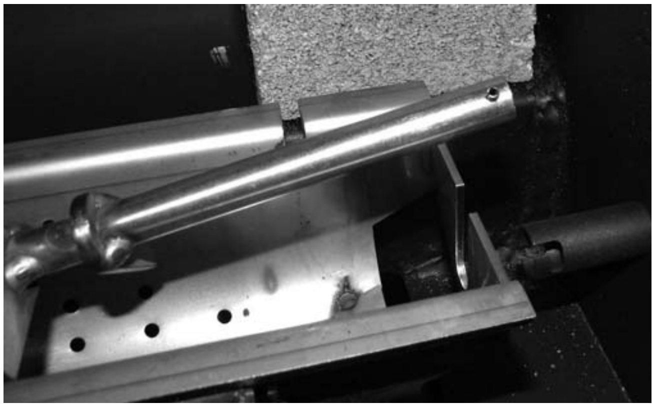
Fig. #10



The Burn-Pot (cradle the Liner sits in) should be emptied after burning about 10 - 15 bags of pellets.

When the stove is cool, open the door and remove the Burn-Pot Grate, push it back to release the tabs, then lift up. Disengage the cleaner bar by rotating it until the pin on the end is free of the coupler. Then slide the cleaner left and up. Once it clears the liner, pull to the right to free the other end.

Fig. #11



Lift out the Stainless Steel Liner by pulling the Burn-Pot Assembly towards you, then lift up. Disengage the Burn-Pot from the inlet tubes and remove. Empty the ash from the Burn-Pot and re-install. Scrape the bottom and sides of the pot with a screwdriver to remove all ash and clinkers from these surfaces if needed. Make sure all the holes in the pot are open. Place the Burn-Pot Liner back into the Burn-Pot. Push back until the ignitor tube aligns and the tabs on the front of the liner engage. Re-install the Burn-Pot Mixer Bar and Grate.

Cleaning Glass

CAUTION: Do not clean glass when hot. Do not open the front door when the stove is hot. To open the door, rotate the handle clockwise until it clears the catch. Clean the glass using a soft cloth or paper towel and household glass cleaner or wood stove window cleaner. A damp cloth with a small amount of ash from the firebox can also be used to clean the glass.

Ash Pan Removal and Cleaning

CAUTION: Do not remove the ash pan when the stove is hot. To remove the Ash Pan, Rotate the latch counter-clockwise to release the ash pan. Pull the Ash Pan up then out from the stove. Vacuum out the Ash Pan enclosure before inserting the Ash Pan.

Fig. #12



To close, push the Ash Pan in until the bottom catches and drops down. Make sure the Ash Pan is tight to the face of the Ash Pan enclosure, then tighten the Latch.
Note that if the ash pan does not seal tightly to the stove, the auger may not turn and the stove will shut down.

CAUTION: Disposal of Ashes - Ashes should be placed in a metal container with a tight fitting lid. The closed container should be placed on a non-combustible floor or the ground – well away from all combustible materials, pending final disposal. If the ashes are disposed of by burial in soil or otherwise locally dispersed, they should be retained in the closed container until all cinders have been thoroughly cooled.

Inspect Gaskets

Inspect the condition of the rope gasket around the door, window and ash pan, periodically, and replace if necessary. Inspect the die-cut gaskets on the blowers when cleaning and replace if necessary.

Cleaning the Heat Exchanger

CAUTION: Do not operate the heat exchange scraper when the stove is hot.

Located at the center of the grill on the top front of the stove is a 5/16” Stainless Steel rod that is attached to the scraper surrounding the heat exchange tubes. To remove ash build-up and maintain heat efficiency from the stove, pull this rod in and out at least once a week when the stove is cold.

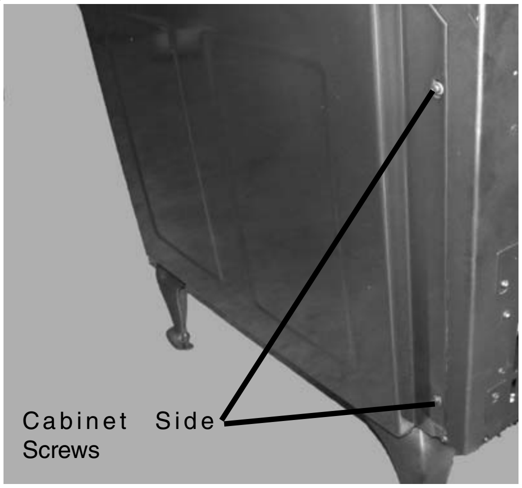
Fig. #13



Cabinet Side Removal

Remove the two screws holding the back of the Cabinet Side to the chassis. Lift up slightly to disengage the screws at the front and pull off. Installation is the reverse.

Fig. #14



Cleaning the Flue Gas Passages

Cleaning the flue gas passage should be done at least once a year or every one to two tons of pellets used.(50-100 bags) Burning high ash pellets may require this cleaning to be done more often.
Clean this passage only when the stove and ash are cold.

Cleaning the Firebox Passage:

Remove the Burn-Pot and Liner as per previous cleaning section, and use an appropriate vacuum cleaner to remove the loosened ash from the firebox. Push on the top of the brick – this will kick out the bottom edge. Pull the bottom of the Fire Brick towards you. Drop the brick down once it clears the ledge.

Fig. #15



Using a ratchet with a 3/8” socket, remove the screws on both sides of the Firebox Liner Fig.#16 Remove the Liner from the firebox. Using a filtered shop vacuum, clean out all the ash in the exhaust passages (Fig #17).

Fig. #16

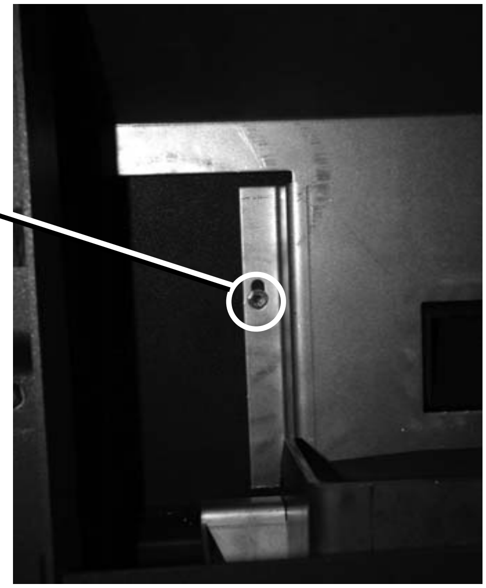
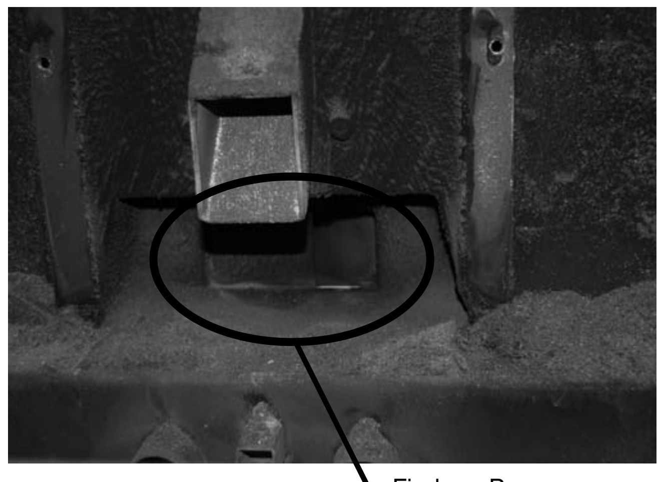


Fig. #17



Don’t forget to clean up around the heat exchanger. Once the flue passage is clear of ash build-up, reinstall the Firebox Liner.

Cleaning the Vent Pipe

Soot and Flyash – Formation and Need for Removal: The products of combustion will contain small particles of flyash and/or soot. The Flyash and/or soot will collect in the exhaust venting system and restrict the flow of the flue gases. The exhaust venting system should be inspected at least once every year to determine if cleaning is necessary. Sweep the pipe as needed. A tee and clean-out in the vent system at the transition from horizontal to vertical will make this cleaning easier.

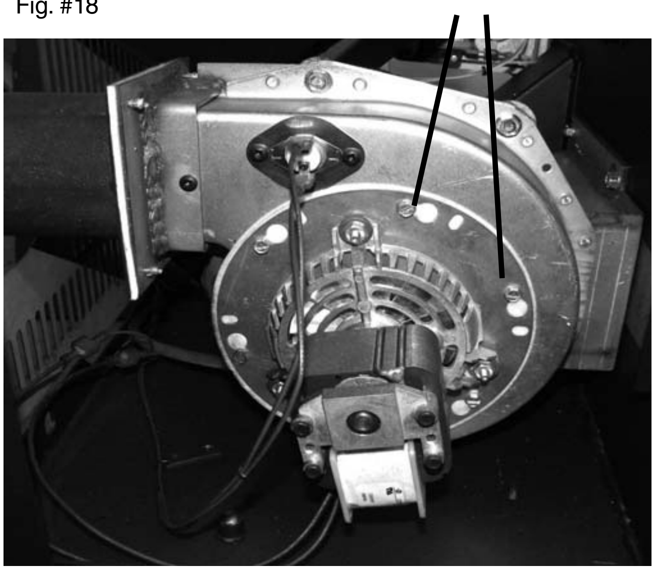
Pacific Energy Fireplace Products recommends having your stove inspected and cleaned by a trained professional

Cleaning the Combustion Blower:

To clean the combustion blower, unplug the stove, remove the left cabinet side. Loosen but do not remove the six screws (Fig.#18) with an 1/4" nut driver or socket. Rotate the motor counter-clockwise. The motor can now be pulled from the fan housing. The cooling fan and main blade can be vacuumed once the motor is removed. Before reinstalling, vacuum out the blower housing and the flue gas passages leading to and from the combustion blower. Clean the inner surface of the Proof of Fire Switch located on the Blower housing. When reinstalling the motor, check the gasket between the motor and the fan housing, a new gasket may need to be installed if damaged. Place the motor back on the fan housing (motor down) and rotate clockwise to lock the flange, hand tighten the six screws.

Fig. #18

1/4"hex head screws



Cleaning the Convection Blower:

To clean the convection blower, remove the right cabinet side (see previous page). Disconnect the stove power cord from the electrical outlet. Using a 3/8" wrench, remove the two bolts (Fig #19) securing the blower to the blower duct. Slide the blower out the side towards you disengaging it from the blower duct. A vacuum can be used to remove any dust accumulation on the blower's blades or inside the blower duct. Caution should be used not to damage the blower's blades during cleaning. To reinstall the blower, slide the blower back into the retaining lip and install the screws.

Fig. #19

REMOVE



Door Removal

CAUTION: Do not open the Firebox door when the stove is hot or operating.

To remove the door, rotate the door handle clockwise to release, and swing the door open. Lift the front door up and off the hinges. To reinstall the door, repeat the steps in reverse order.

Back Grill Removal

To remove the back grill, loosen the three screws securing the grill to the chassis. The back can now be pulled up and off of the stove. Installation is the reverse.

Component Information

The following is a list of other components and their functions.

Igniter

The Warmland PS45 stove comes equipped with an automatic igniter for lighting the fuel when the stove is in the lighting mode. The igniter superheats air that is pulled through the Burn-Pot by the combustion blower to light the fuel. The igniter remains energized for the first 10 minutes of the lighting sequence.

Vacuum Switch

The stove has a Vacuum Switch, located on the right rear hopper leg. If the pressure drops in the firebox due to a leak, a blocked flue, open front door or unsealed ashdrawer, the vacuum switch will sense this and open the circuit to the Auger Motor. The stove will then go into a shutdown mode.

Auger and Auger Motor

A 1 rpm gearmotor turns the Auger, lifting pellets up the augertube. The pellets are then dropped down a tube and into the burn-pot. The auger is controlled by the control board.

HIGH LIMIT Snap Switch (Manual Reset)

This switch is installed on the convection blower duct and shuts the stove down if it senses excessive temperatures (Opens at 200° F). This snap switch has a reset button on it and will not allow the stove to start up until the reset button has been pushed.

Proof of Fire Snap Switch

This switch is installed on the combustion blower and is used to sense when there is a fire in the stove during Start-Up. It will shut the stove off if it senses there is no fire in the Fire-Pot Liner.

Draft Damper

The Warmland PS45 Classic stove has a draft damper located at the left side of the stove directly in front of the combustion blower. After the stove is installed the Draft Damper will need to be set for the vent configuration. With the stove hot, use a magnehelic gauge to adjust the slider until a reading of .15" is achieved in the firebox. The sampling hole is located in the top of the ash box, above the ashpan. To reduce the draft, move the adjuster toward the center of the stove.

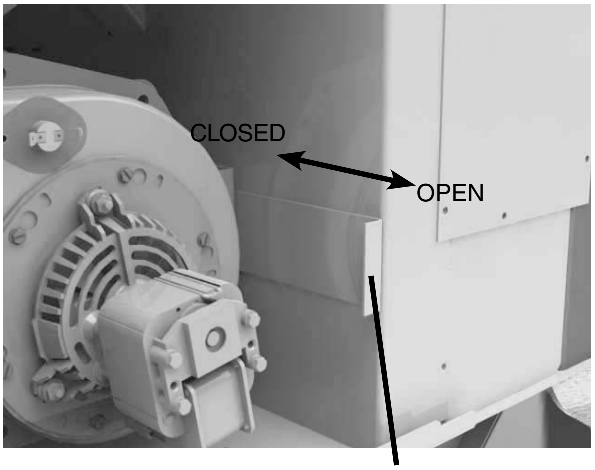
Burn-Pot Mixer Motor

This 1 RPM gear motor turns the Burn-Pot Mixer rod via a coupling and chain drive system.
The Mixer Motor is controlled by the control board.
.

Hopper Switch

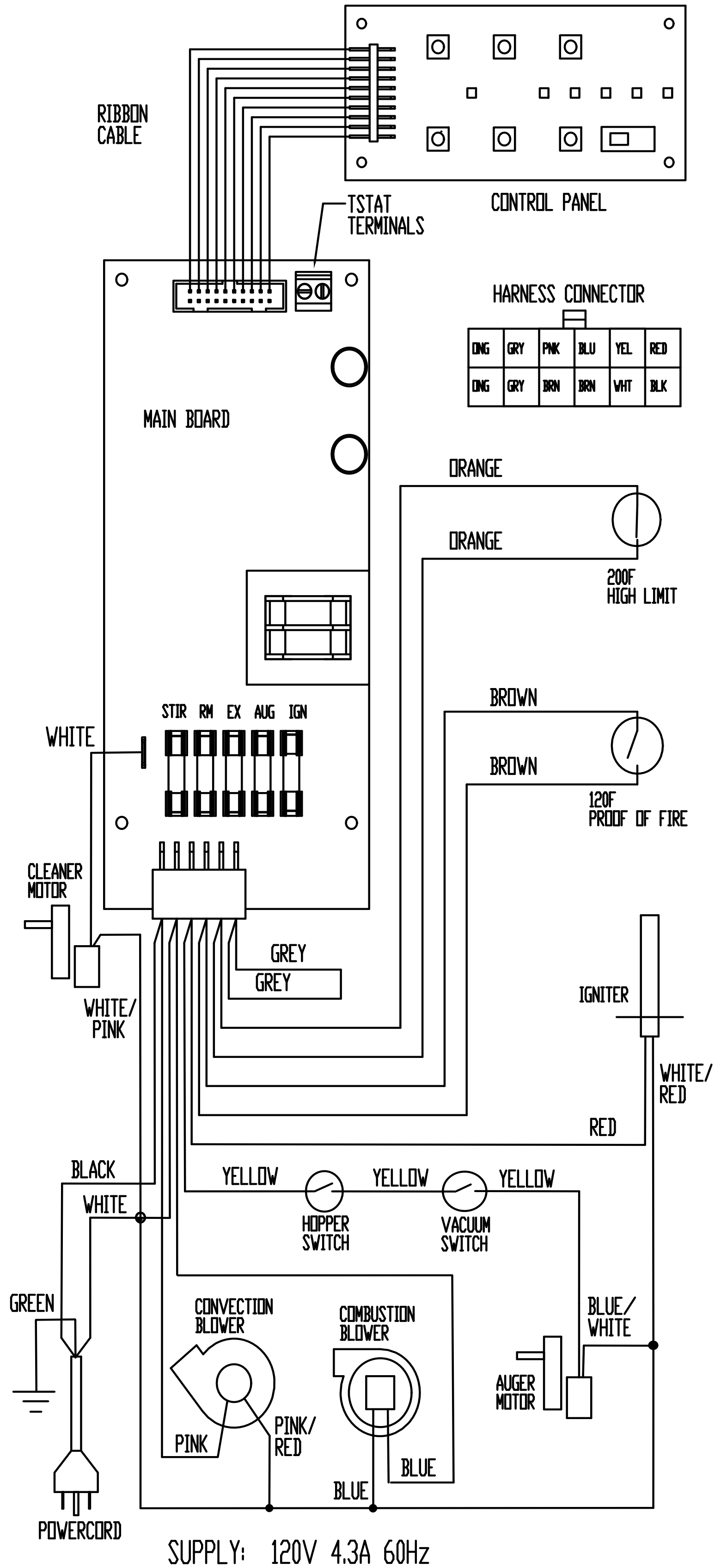
The hopper switch is located on the back of the hopper. It is activated by the arms of the hopper lid. If the hopper is left open it will cut power to the auger motor, the fire will go out and the stove will go into shutdown mode. The #3, head output light will also be flashing.

Fig. #20



DAMPER: FACTORY SET, FLUSH WITH FIREBOX SIDE.

Wiring Diagram



010210 5050.838 - A PS 45 WIRING

Components List

ITEM	QTY.	PART NUMBER	DESCRIPTION
1	1	PS45.7416XXX	PS45 CLASSIC ASHLIP
2	1	DR31.????	DOOR ASSEMBLY
A	1	PSRP.7340	BURN POT/MIXER ASSEMBLY
3a	1	PS45.7341WLD	BURN-POT LINER
3b	1	PS45.7340WLD	BURN-POT
4	1	PS45.7345Weld	BURN-POT LINER MIXER
5	1	PS45.7343WLD	BURN-POT LINER GRATE
6	2	5096.99	BRICK
7	1	7311	FIRBOX LINER
8	1	5001.035	TUBE CLEANER ROD
9	1	5001.011	MIXER COUPLING
10	1	7318	MIXER DRIVE BACKING PLATE
11	2	PS45.5001015WLD	BURN-POT MIXER GEAR
12	1	5001.003	AUGER MOTOR
13	1	5001.016	CHAIN
14	1	5027.172	HI LIMIT TEMPERATURE SWITCH, MANUAL RESET
15	1	5001.003	MIXER MOTOR
16	1	5001.005	CIRCUIT BOARD - MOTHER CARD
		5001.0051	KEYPAD DAUGHTER CARD
		5001.0053	RIBBON CABLE
17	1	PS45.7410	CONTROL PANEL
18	1	5050.8318	CONTROL PANEL DECAL
19	1	5028	POWER CORD
20	1	5024.504	CONVECTION BLOWER
21	1	5027.175	HOPPER SWITCH
22	1	5001.004	IGNITOR
23	1	5027.173	VACUUM SWITCH
24	1	5001.001	AUGER ASSEMBLY
B		PSRP.7384	VENT STARTER TUBE ASSEMBLY
25	1	5068.7173	VENT STARTER TUBE GASKET
26	1	PS45.7384WLD	VENT STARTER TUBE
27	1	5027.171	EXHAUST TEMPERATURE SWITCH
28	1	5024.503	COMBUSTION BLOWER
29	1	PS45.7415XXX	SIDE SHIELD, LEFT/RIGHT
30	1	PS45.7401XXX	CLASSIC TOP
31	1	PS45.7404WLD	HOPPER LID
32	1	7366	REAR PANEL
33	1	VISC.####	VISTA CLASSIC TRIVET
34	1	PS45.7393	INTAKE PIPE
35a	1	PS45.7355ASSY	ASHPAN ASSEMBLY
35b	1	PS45.7350ASSY	ASHPAN ENCLOSURE
36	1	5038.3	HOPPER LID HANDLE
37	4	CAST.LEG+++	LEGS
*NOT SHOWN			
	1	PS45.7396WELD	Vacuum Probe Assy.
	2	5072.375	FLANGE BUSHING - 5/8" BORE X 1/2"
	1	5044.713	5/8" ID STEEL SHAFT COLLAR
	1	5072.374	FLANGE BUSHING - 5/8" BORE X 5/8" (large mixer bushing)
	1	5072.373	FLANGE BUSHING, 3/8" BORE X 1/4" (small mixer bushing)
	1	7407	HOPPER LID GASKET, 1/2" FIBERGLASS ROPE W PSA

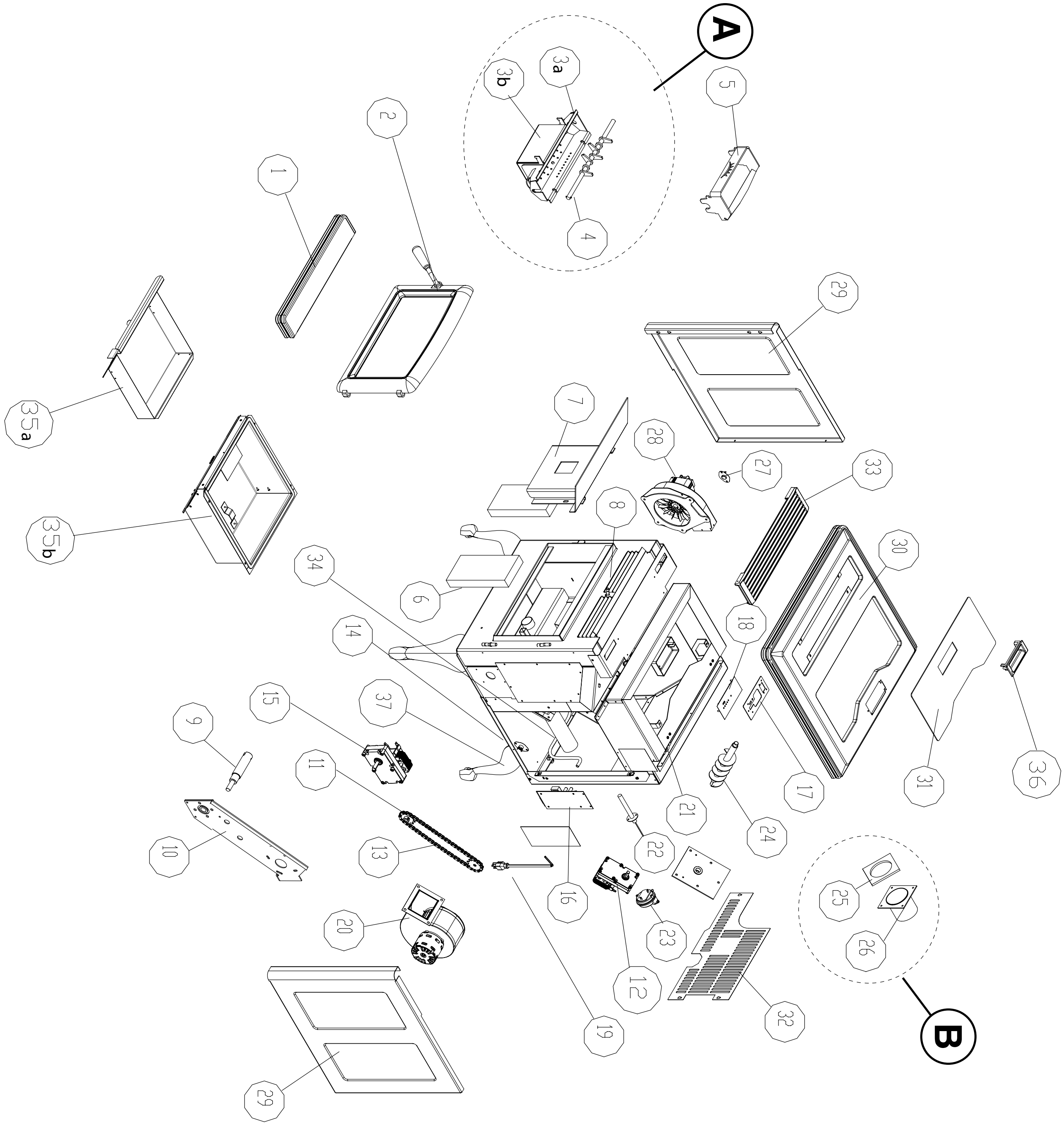
(XXX) - COLOR CODE: BKA(BLACK ENAMEL), IYA(IVORY ENAMEL), CBA(BROWN ENAMEL), RDA(RED ENAMEL)

(????) - OPTION CODE: WBKA(ARCHED BLACK), WRABKA(RADIANT BLACK), WGDA(ARCHED GOLD), WRAGDA(RADIANT GOLD), WNIA(ARCHED NICKEL), WRABIA(RADIANT NICKEL), WBNA(BRUSHED NICKEL), WRABNA(RADIANT BRUSHED NICKEL)

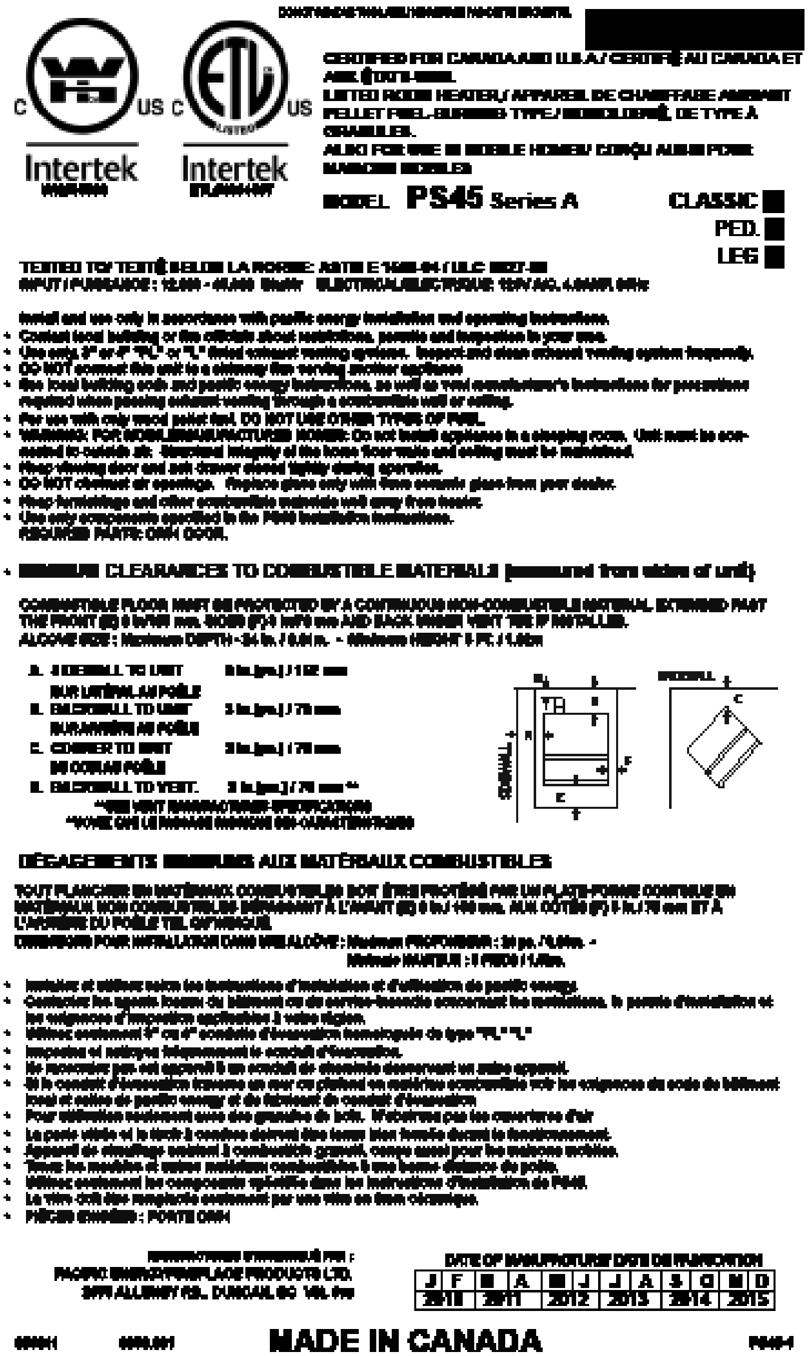
(####) - OPTION CODE: CTBKA(VISTA CLASSIC TRIVET, BLACK), CTGDA(VISTA CLASSIC TRIVET, GOLD), CTNIA(VISTA CLASSIC TRIVET, NICKEL)

(+++) - OPTION CODE: GLD(GOLD), ST(STOCK BLACK), NI(NICKEL), BNI(BRUSHED NICKEL)

Components List



Rating Label



PACIFIC ENERGY FIREPLACE PRODUCTS LTD.

www.pacificenergy.net
2975 Allenby Rd., Duncan, BC V9L 6V8
Technical Support: 250-748-1184